

AHRQ Quality Indicators™ Case Study: Essentia Health

Key Findings

- ▲ Because public and private employers use the AHRQ Patient Safety Indicators (PSIs) in their value-based purchasing, Essentia Health has made improving performance on 10 of the AHRQ PSIs a priority.
- ▲ As a result, Essentia Health-Fargo, Essentia Health's North Dakota hospital, has improved patient safety through education and prevention activities, with a focus on three AHRQ PSIs: PSI 3 (Pressure Ulcer Rate), PSI 9 (Perioperative Hemorrhage or Hematoma Rate), and PSI 15 (Accidental Puncture or Laceration Rate).
- ▲ Essentia Health-Fargo has reduced PSI 15 (Accidental Puncture or Laceration Rate) from a rate of 1.2 events per 1,000 eligible procedures in 2013 to 0.07 events in the first half of 2015, and it has improved the quality of care for treatment of pressure ulcers (PSI 3).

In 2013, Essentia Health analyzed a benchmark report prepared by Truven Health Analytics and found that select PSIs were higher than national benchmarks, suggesting opportunities for making improvements in care delivery. As a result, Essentia Health tracked 10 of the AHRQ PSIs (see Table 1), ultimately focusing on performance improvement for a subset of these PSIs. This Impact Story highlights those efforts, describing Essentia Health's activities related to PSI 3 (Pressure Ulcer Rate), PSI 9

(Perioperative Hemorrhage or Hematoma Rate), and PSI 15 (Accidental Puncture or Laceration Rate). Essentia Health focused on gaining a better understanding of system process factors that reduce the risk of patient harm. An in-depth analysis examined vulnerabilities in patient safety processes such as electronic medical records (EMRs), provider knowledge, documentation, and coding. This process led to a transition from a reactive approach to a proactive approach.

Essentia Health: At a Glance

- ▲ A private, non-profit integrated health care system with facilities in Minnesota, Wisconsin, North Dakota and Idaho
- ▲ A \$1.7 billion enterprise with more than 14,000 employees including 1,500 physicians and advanced practitioners.
- ▲ Includes 16 hospitals, 69 clinics, eight long-term care facilities, two assisted living facilities, four independent living facilities, and one research institute.



AHRQ PSIs Spur the Implementation of Education and Prevention Activities To Improve Patient Safety and Care

PSI 3 Pressure Ulcer Rate: Education and Assessment Lead to Prevention

To improve its PSI 3 results, Essentia Health-Fargo relied on AHRQ resources and technical specifications in the case review process, which was critical to completing a gap analysis and identifying opportunities to improve clinical care delivery. Essentia Health-Fargo revised its skin care program to assure the implementation of evidence-based practices. Vigilance in adhering to the revised program, self-measurement of processes and outcomes, and the use of external benchmarking have resulted in early identification of skin care issues and accurate documentation and coding.

“Our original focus on Patient Safety Indicators stemmed from the emphasis that value-based purchasers placed on these indicators.”

—Verna Alverson, RN Inpatient Clinical Quality Analyst

Essentia Health also worked diligently to communicate the importance of these prevention activities across all levels of staff. Its hard work paid off. “The impact has been not only on the operational side, but also on better care for the patient,” noted Heidi Brown, RN, an Inpatient Clinical Quality Analyst at Essentia Health.

Essentia’s efforts also increased opportunities to catch and treat pressure ulcers early. “They are catching more resulting in better quality care, which is keeping everyone motivated,” said Brown.

PSI 9 Perioperative Hemorrhage or Hematoma Rate: Changing Surgical Processes Improved Results

To improve its PSI 9 rate, Essentia Health-Fargo closely examined the procedures that most frequently cause hematoma (bruising) in patients. The health system determined that use of a new hemostatic wristband for angiograms was causing hematomas on the wrist of some patients. A working group of nurses, physicians,

Table 1: AHRQ PSIs Implemented by Essentia Health

PSI 3: Pressure Ulcer Rate
PSI 6: Iatrogenic Pneumothorax Rate
PSI 7: Central Venous Catheter-Related Blood Stream Infection Rate
PSI 8: Postoperative Hip Fracture Rate
PSI 9: Perioperative Hemorrhage or Hematoma Rate
PSI 11: Postoperative Respiratory Failure Rate
PSI 12: Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate
PSI 13: Postoperative Sepsis Rate
PSI 14: Postoperative Wound Dehiscence Rate
PSI 15: Accidental Puncture or Laceration Rate



and education staff met and developed an improved process for cases where the wristband is used. When consistently implemented across departments, the new process resulted in a decline in perioperative hemorrhage or hematoma incidences. The end result was safer care for patients and improvement in Essentia Health's PSI 9 rate for patients undergoing this particular procedure.

PSI 15 Accidental Puncture or Laceration Rate: Provider and Staff Education Yields Improvement

Essentia Health focused on PSI 15 early in its implementation of the AHRQ PSIs, as it appeared to offer the greatest opportunity for performance improvement. When Essentia examined the data underlying its PSI 15 rate, staff found that some of the cases flagged as a patient safety event by the indicator were incorrectly coded as "accidental;" upon closer examination, staff determined that these lacerations were inherent to the particular surgical procedure. As a result, Essentia Health-Fargo instituted case-by-case peer review by a physician in the relevant specialty. In addition, quality department staff and providers completed a literature search, including a search of AHRQ's Web site, which provided a scientific definition of accidental puncture, from which they created educational materials for providers. These materials were used as part of a provider education effort across Essentia Health, designed to clarify the definition of an accidental puncture or laceration and distinguish it from lacerations that are part of the procedure.

As a result, Essentia Health-Fargo saw improved performance on PSI 15, from a rate of 1.2 events per 1,000 eligible procedures in 2013 to 0.07 events in the first half of 2015. In fact, Verna Alverson, RN Inpatient Quality Analyst, explained that for the first two quarters of 2015, Essentia Health's performance for PSI 15 has been better than the national average. "The PSIs show us where to focus," said Essentia Health's Alverson. "We use the technical specifications to examine each case individually and then go back to the frontline to make improvements."

Alverson explained that if a coding error occurs, the findings are communicated back to the coder and the director of the department for followup and education. If appropriate, additional education is presented to the entire coding department staff. "By improving accuracy in coding through clarifying and improving documentation, it allows us to get a true picture of areas of opportunities and implement processes that improve patient outcomes," said Alverson.

In addition to a commitment to performance improvement at all levels of the organization, Essentia Health has found that transparency is very important. "With this transparency it enables us to draw other learning opportunities from other sites within the region and/or system." As such, physicians, other providers, and staff are able to access Essentia Health's PSI results on an internal dashboard. Discussion of the PSI rates and approaches to improving patient care

outcomes occurs at all levels of the organization, including the systemwide quality committee and the Board of Directors.

Going Forward With the AHRQ QIs

Essentia Health plans to continue to focus on the AHRQ PSI module. Alverson noted that Essentia Health has found value in being on the AHRQ QI email listserv to receive updates and announcements of Webinars offered through the AHRQ QI program.

Alverson noted that the AHRQ site includes a wealth of evidence-based information and toolkits that provide adaptable solutions and guide the provision of safe care and the reduction of patient harm.

Interview Participants

Essentia Health: Verna Alverson, Mary Hegseth, and Heidi Brown; SWI: Diane Stollenwerk and Margaret Trinity; Pantheon: Rob Timmons; AHRQ: Mia DeSoto

About the AHRQ Quality Indicators (QIs)

The AHRQ QIs include four sets of measures—Patient Safety Indicators, Inpatient Quality Indicators, Prevention Quality Indicators, and Pediatric Quality Indicators—which address quality of care for patients hospitalized for a broad range of procedures or conditions that are high risk, problem prone, and/or high volume. The AHRQ QIs represent a national standard and are publicly available at no cost to the user. Many of the indicators are endorsed by the National Quality Forum (NQF), which is considered the gold standard for health care measurement in the United States. They can be used to support quality improvement efforts, public reporting, and accountability programs, and ultimately to help provide safe, effective care to patients. Many of the AHRQ QIs are used by the Centers for Medicare and Medicaid Services (CMS) and other payers for quality monitoring, pay-for-performance, and value-based purchasing initiatives. Hospitals and health systems can use AHRQ QIs as part of an overall performance initiative to improve the quality of care. For more information about the AHRQ QIs visit <http://www.qualityindicators.ahrq.gov/>.

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